

University of New Hampshire University of New Hampshire Scholars' Repository

NH Water Resources Research Center Scholarship

NH Water Resources Research Center

6-1-1994

PISCATAQUA RIVER DREDGING/ SEDIMENT TRANSPORT PROGRAM

Barbaros Celikkol

University of New Hampshire

M. Robinson Swift

University of New Hampshire

Thomas P. Ballestero

University of New Hampshire, tom.ballestero@unh.edu

Follow this and additional works at: https://scholars.unh.edu/nh_wrrc_scholarship

Recommended Citation

Celikkol, Barbaros; Swift, M. Robinson; and Ballestero, Thomas P., "PISCATAQUA RIVER DREDGING/SEDIMENT TRANSPORT PROGRAM" (1994). *NH Water Resources Research Center Scholarship*. 110.
https://scholars.unh.edu/nh_wrrc_scholarship/110

This Report is brought to you for free and open access by the NH Water Resources Research Center at University of New Hampshire Scholars' Repository. It has been accepted for inclusion in NH Water Resources Research Center Scholarship by an authorized administrator of University of New Hampshire Scholars' Repository. For more information, please contact nicole.hentz@unh.edu.

PISCATAQUA RIVER DREDGING/SEDIMENT TRANSPORT PROGRAM

*Principal Investigators: Dr. Barbaros Celikkol, Dr. M. Robinson Swift, Dr. Thomas P. Ballestero,
University of New Hampshire*

Descriptors: Deposition, dredging, estuary

Problem and Research Objectives:

The sedimentation processes in the Piscataqua River which necessitate the frequent dredging procedures are poorly understood, due partly to the extreme tidal and flood currents, and also to the complexity of the sediment transport mechanisms involved. The objective of this modeling project was to determine the fate of the redeposited spoils. To achieve this objective, the TABS-2 computer software package was calibrated and verified with field data of the Piscataqua River hydraulics and sediment transport processes.

Principal Findings and Significance:

The velocity and bed load sediment transport modeling of the lower Piscataqua River channel determined that the study site is accumulating sediment during the simulated tidal event. Deposition is greatest in the vicinity of the disposal location, while the locations between the dredge site and the disposal site show little or no change in bed elevation following the tidal event.